

FIG 6

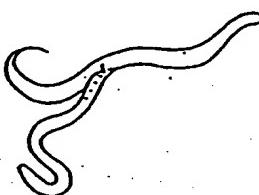
intact
approaches vulva



stops at vulva



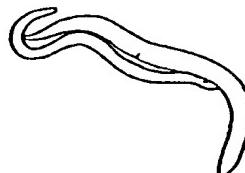
inserts spicules and transfers sperm



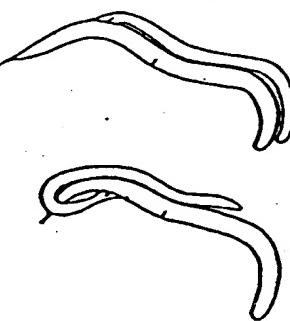
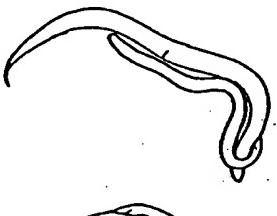
hook ablated
approaches vulva



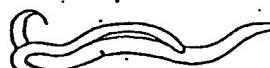
passes vulva



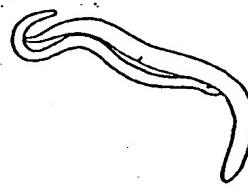
circles hermaphrodite



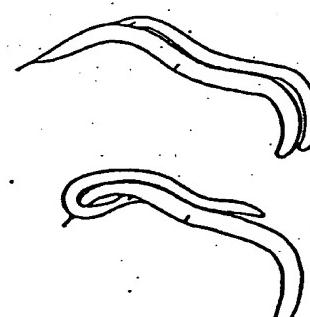
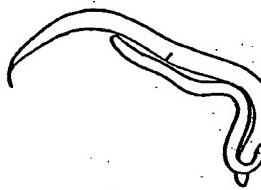
lov-1(sy552)
approaches vulva



passes vulva



circles hermaphrodite



stops at vulva



initiates a slow search for the vulva using
the p.c.s. and spicules ($t=300s$)



inserts spicules and transfers sperm

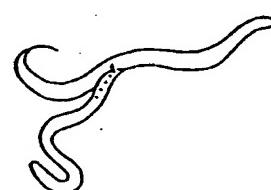


Figure 2

A. *lov-1(sy552)* rescue data

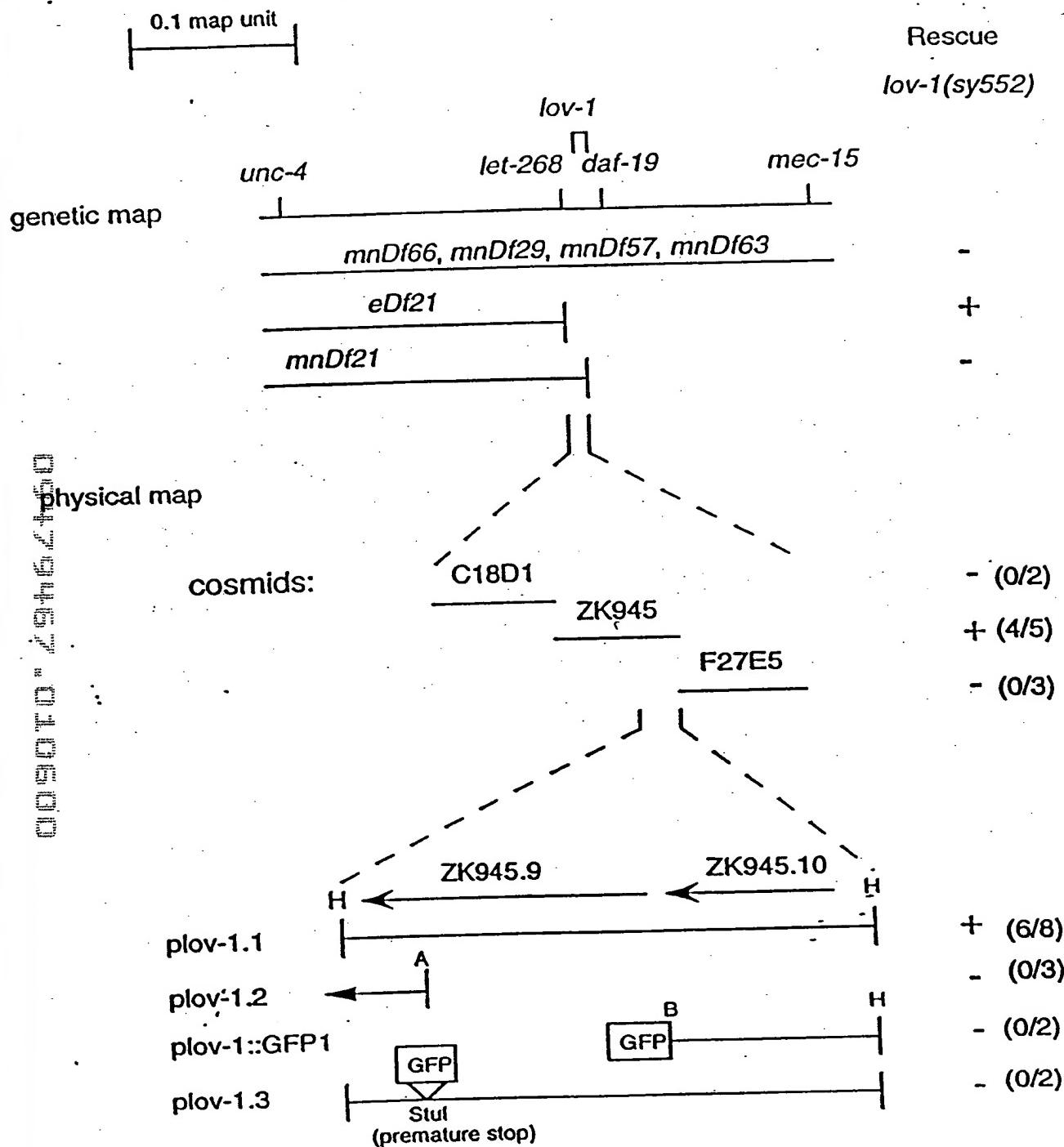
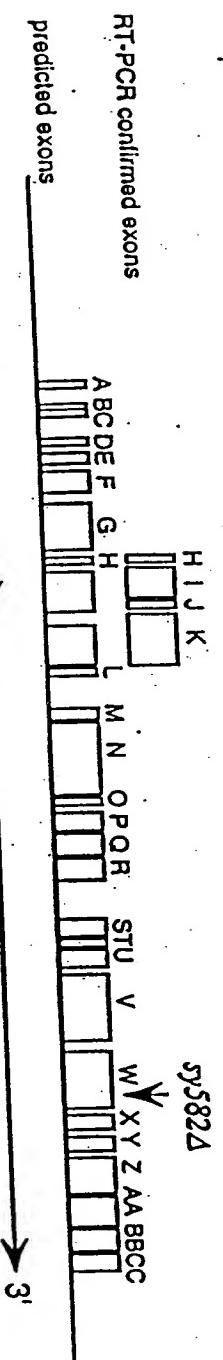
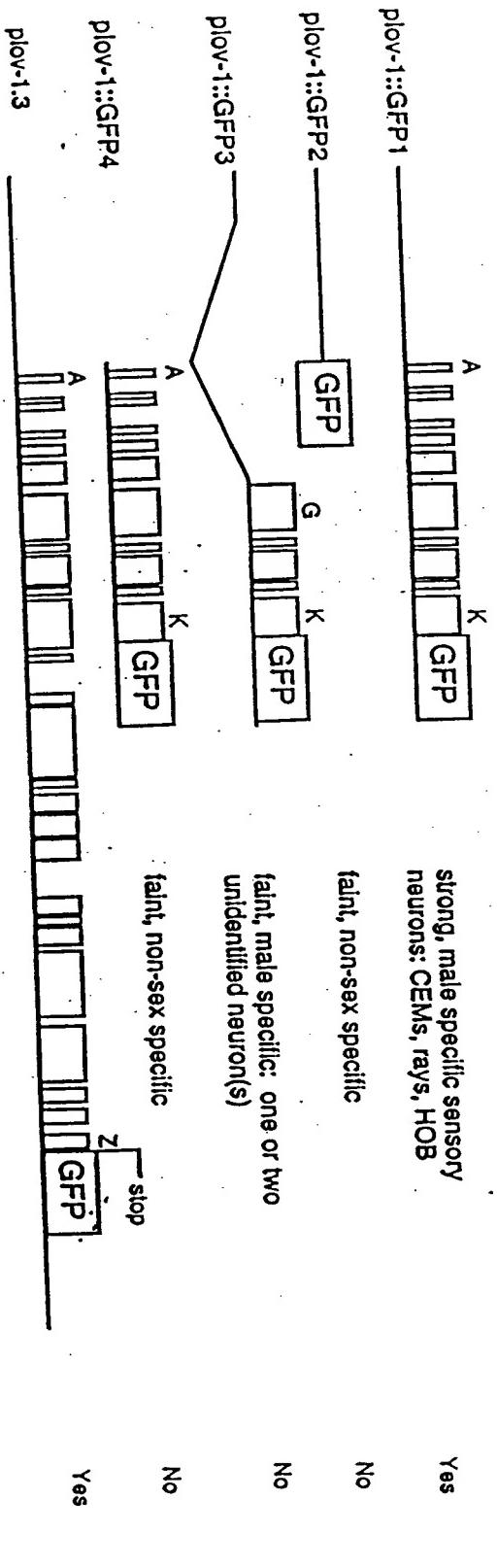


FIGURE 2B

B. *lov-1* gene structure: 16.7 kb rescuing clone

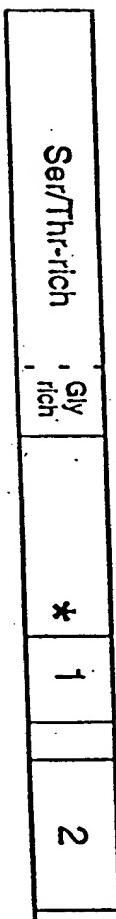


C. Schematic of GFP fusion constructs and expression data

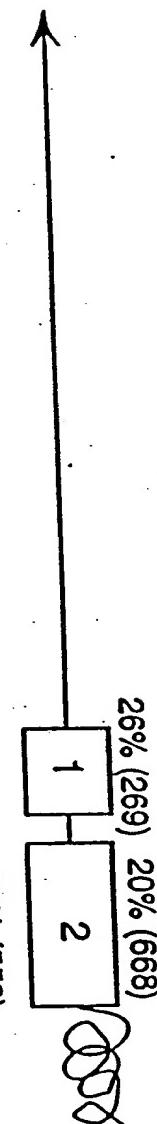


D. LOV-1 structural features and sequence homologies

LOV-1



PKD1



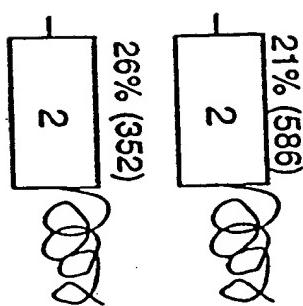
PKD2

PKDL

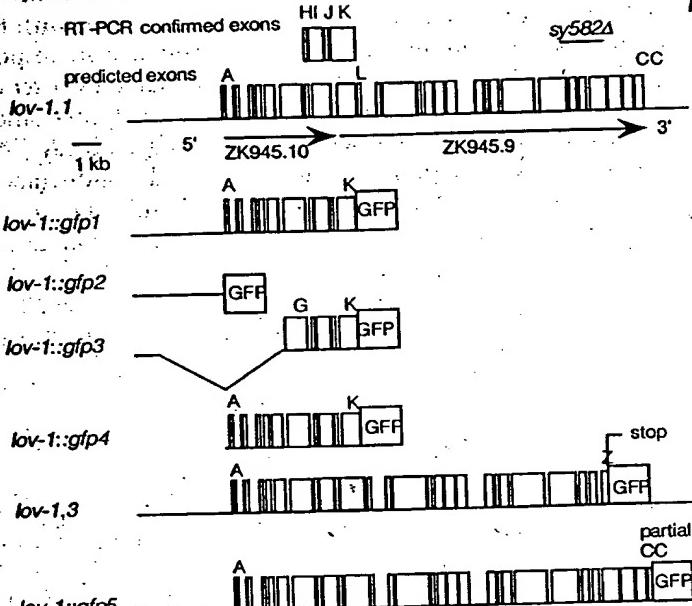
PKDL

Y73F8A.B+A (913 aa)

coiled-coil



F16.3

lov-1 genomic structure and GFP fusions

	Behavioural phenotypes	Expression pattern	Subcellular localization
<i>lov-1</i> (sy582Δ) rescue	wild type	wild type	

+ (6/8)

+

- (0/2)

DN

male-specific sensory neurons: CEMs, HOB, rays

faint, nonspecific

faint, male-specific: 1 or 2 unid'ed neurons

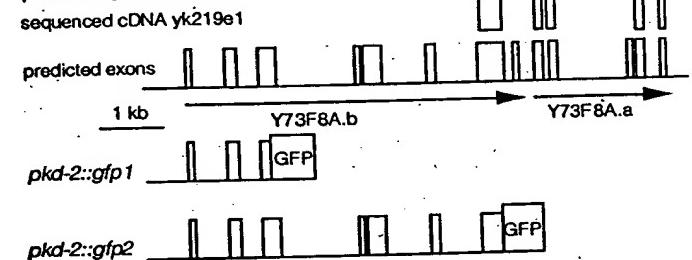
faint, nonspecific

not expressed

male-specific sensory neurons: CEMs, HOB, rays

Basodendritic (Cell body, sensory ending)

Cell body only

pkd-2 genomic structure and GFP fusions

	Behavioural phenotypes	Expression pattern	Subcellular localization
<i>pkd-2</i> rescue	wild type	wild type	

+

male-specific sensory neurons: CEMs, HOB, rays

nonspecific, ring neurons (weak)

Uniform (cell body, axon, dendrite)

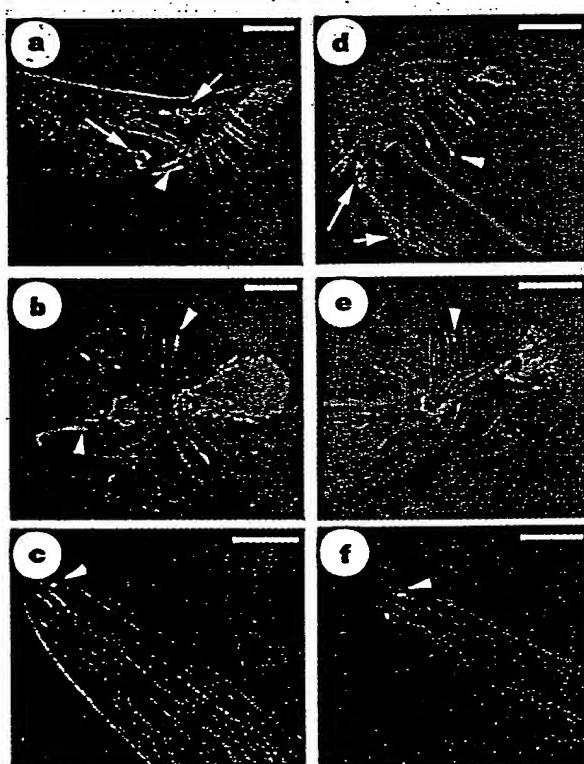
+

male-specific sensory neurons: CEMs, HOB, rays

Basodendritic (Cell body, sensory ending)

Numbers in parentheses indicate the ratio of rescuing stable lines to the number of stable lines examined. DN, dominant negative.

F16.4



4

Figure LOV-1::GFP1 and PKD-2::GFP2 are colocalized to adult male sensory cell bodies and dendrites. The spicules, hook structure and posteriormost fan autofluoresce. Arrows, neuronal cell bodies; arrowheads, dendrites or cilia. Images (merged DIC and fluorescence) were obtained using confocal microscopy. a–c, *lov-1*::gfp1. a, HOB and ray cell bodies (arrows), HOB dendritic process (a, b), HOB and ray process 5 (arrowheads). c, Ciliated endings in nose tip from midcephalic CEM neurons (cell bodies not shown). d–f, *pkd-1*::gfp2. d, Ray cell (arrow) and ray process 2 (arrowhead). e, Ray process 5 (arrowhead). f, Midcephalic CEM ciliated endings (arrow). Scale bar, 20 μm.